--In one embodiment, the molecular sieve catalyst and the oxygenate feed travel through the reactor at a gas superficial velocity of 1 m/sec to 20 m/sec.--

--In another embodiment, the first feed inlet at the first end of the riser reactor and a second feed inlet that is located between the first end and the second end. The step of introducing further comprises introducing oxygenate feed in the gaseous state into the first feed inlet and introducing oxygenate feed in the liquid state into the second feed inlet.--

In The Claims

Please amend the claims as follows:

Please cancel claims 1-27 without prejudice.

Please add the following new claims 28-38:

28. (New) A reactor system comprising a riser reactor having a first end and a second end, the second end of the riser reactor being in fluid communication with a disengaging zone, the disengaging zone having a first catalyst discharge line and a second catalyst discharge line, the second catalyst discharge line being in fluid communication with a regenerator, the regenerator having an inlet for injecting a regeneration medium and an outlet line for discharging at least partially regenerated catalyst, wherein the first catalyst discharge line and the outlet line of the regenerator are in fluid communication with the first end of the riser reactor, the reactor system further comprising the steps: of

introducing a molecular sieve catalyst and oxygenates into the first end of the riser reactor

withdrawing olefin product and molecular sieve catalyst having carbonaceous deposits from the second end of the riser reactor into a disengaging zone to disengage the olefin product from the molecular sieve catalyst having carbonaceous deposits;

withdrawing the olefin product from the disengaging zone;

withdrawing a first portion of the catalyst having carbonaceous deposits through the first catalyst discharge line to the first end of the riser reactor;

withdrawing a second portion of the catalyst having carbonaceous deposits through a second catalyst discharge line;

regenerating the second portion of the catalyst having carbonaceous deposits to form an at least partially regenerated catalyst; and

discharging the at least partially regenerated catalyst from the regenerator to the first end of the reactor.

29. (New) The reactor system of claim 28, wherein the disengaging zone comprises at least one cyclone separator.

30. (New) The reactor system of claim 29, wherein the cyclone separator has a catalyst discharge end and a product discharge end in fluid communication with a product outlet line, wherein the olefin product is withdrawn through the product outlet line.

31. (New) The reactor system of claim 28, wherein the disengaging zone is in fluid communication with a stripping zone, with the second catalyst discharge line being in fluid communication with the stripping zone.

32. (New) The reactor system of claim 31 wherein the stripping zone is located within the disengaging zone.

33. (New) The reactor system of claim 31, wherein a catalyst cooler is in fluid communication with the regenerator.

34. (New) The reactor system of claim 28, wherein the second end of the reactor is greater in diameter than the first end of the riser reactor.

35. (New) The reactor system of claim 28, wherein one end of the riser reactor selected from the group comprising the first end and the second end is different in diameter from an end opposite from the one end.

36. (New) The reactor system of claim 28, wherein the molecular sieve catalyst and the oxygenate feed travel through the reactor at a gas superficial velocity of 1 m/sec to 20 m/sec.

37. (New) The reactor system of claim 28, further comprising a first feed inlet at the first end of the riser reactor and a second feed inlet that is located between the first end and the second end.

38. (New) The reactor system of claim 37, the step of introducing further comprises introducing oxygenate feed in the gaseous state into the first feed inlet and introducing oxygenate feed in the liquid state into the second feed inlet.